Discussion Paper for

Nova Scotia's Code of Forest Practice

A Framework for the Implementation of Sustainable Forest Management

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NOVA SCOTIA
Natural Resources

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INTRODUCTION

The forests of Nova Scotia are an important component of the province's economy and social structure. Traditionally forest management has concentrated on the growing and harvesting of trees. More recently the focus has shifted to sustainable forest management whereby the well-being of the forest as a whole is considered. This approach recognizes that forests provide many other values all of which are important to the health of the forest and to society in general. Therefore, the primary objective of sustainable forest management is to sustain the integrity of the forest for future generations while providing for multiple uses, experiences and demands from present Nova Scotians.

Past approaches to establish policies on the management of Nova Scotia forests resulted in Forestry (1986), Wildlife (1987), and Parks (1988) policies for the province. Legislation, which includes the revised *Forests Act (2000), Crown Lands Act, Forest Enhancement Act* and recently enacted regulations on *Forest Sustainability, Wildlife Habitat and Watercourses Protection*, contributes significantly to the concept and implementation of sustainable forest management. The province has also committed to numerous national and provincial initiatives pertaining to the concepts of sustainable forest management. These include: National Forest Strategy (1998), Canada Forest Accord (1998), Canadian Biodiversity Strategy (1995), Nova Scotia Strategy for Sustainable Forestry outlined in a position paper (1997) and the Canadian Council of Forest Ministers Criteria and Indicators for Sustainable Forest Management (1995). The Department of Natural Resources has also incorporated the concepts of integrated resource management (IRM) into the planning process on Crown lands which include the adoption of the IRM Land Use Strategy in 2002.

This framework document for Nova Scotia's Code of Forest Practice presents the principles for implementing sustainable forest management. These principles will set the course for a forest management approach that will conserve and/or maintain natural forest biodiversity and enable the sustainable utilization of forest resources including timber on Crown and private forest lands. Each code principle is presented in a separate section describing the overall intent and a brief outline of the detailed guidelines and technical references to be developed in the near future.

The Code of Forest Practice will provide direction and practical guidance for the sustainable management of timber and non-timber benefits to benefit present and future generations of Nova Scotians. This will include:

- sound forestry practices that will ensure the sustainability of quality timber and other forest products.
- the identification of forest management practices that will maintain or restore biodiversity and forest ecosystems.
- planning and undertaking forest operations in a manner to meet wildlife habitat objectives, including the identification of rare and unique habitats, so that the conditions necessary for healthy populations of wildlife are maintained.
- planning for the integrated management of forest resources so that opportunities for a range of forest uses and values are maintained, e.g. recreation, tourism, aesthetics.
- maintaining quality freshwater, soil and air from the working forest.

Principle of Sustainable Forest Management (SFM)

The goal of SFM as defined in Canada by the Canadian Council of Forest Ministers (CCFM) as follows:

"Management that maintains and enhances the long-term health of forest ecosystems for the benefit of all living things while providing environmental, economic, social, and cultural opportunities for present and future generations"

This definition has been further expanded in the CCFM Criteria and Indicators document (1995) and is summarized by the six criteria:

1. *Conservation of Biological Diversity*
2. *Maintenance and Enhancement of Forest Ecosystem Condition and Productivity*
3. *Conservation of Soil and Water Resources*
4. *Forest Ecosystem Contributions to Global Ecological Cycles*
5. *Multiple Benefits to Society*
6. *Accepting Society's Responsibility for Sustainable Development*

Code Format

The code is comprised of three parts:

Part I Nova Scotia's Code of Forest Practice - *A Framework for the Implementation of Sustainable Forest Management*

This first code document will outline the **Code Principles** that will provide the guidance necessary in planning for sustainable forest management on Nova Scotia Crown and private forest lands.

Part II Code of Forest Practice Guidebooks

The specific detail required to meet the code principles will be found in a series of **Code Guidebooks** that provide the operator with guidelines that must be followed in order to practice forestry on Crown lands. These guidebooks will also provide landowners, contractors and/or operators with the basis for practising forestry on private lands.

Part III Code of Forest Practice Technical References

Finally, a collection of **Technical References** will provide options for forest management that have been found through research and practice to be applicable to Nova Scotia's forest conditions.

Applying the Code

Nova Scotia Crown lands

Application of the Code on Crown lands will occur within the framework of the Integrated Resource Management planning process at the strategic and local levels for each administrative region of the province. Code principles will provide the vision for sustainable forest management at the strategic level of the IRM process, and the guidebooks and technical references will be incorporated to develop the local area and operation plans on all Crown lands. All forest operations on Crown lands will apply the Code of Forest Practice as policy of the Department of Natural Resources.

Private lands

The Code presents to all landowners a comprehensive set of principles and practices which when implemented, lead to sustainable forest management. Some practices are now implemented through existing regulations such as *Forest Sustainability, Wildlife Habitat and Watercourses Protection* and others that apply (Appendix I). Voluntary application of the Code by private landowners will be encouraged by government through extension and education activities. By incorporating the Code principles, guidelines and technical details into their own practices, private landowners can make a significant contribution to sustainable forest management in Nova Scotia.

FOREST ECOSYSTEM MANAGEMENT PRINCIPLES

Biodiversity, or biological diversity, is the full variety of life in all its forms; the broadness of the gene pool, the diversity of species, the array of ecosystems, and the processes that maintain this variety.

In forest ecosystems, trees are the major biotic component upon which overall biodiversity depends. By maintaining biodiversity, we enable existing forest ecosystems to withstand environmental changes, we maintain an opportunity to develop new resource uses, and we preserve Nova Scotia's natural wealth of living organisms. To maintain forest ecosystems and species across their historical ranges, biodiversity must be protected in all forest areas managed for resource use.

This section of the Code outlines the principles for maintaining biodiversity in forests under management. The focus is on managing forest ecosystems to sustain and restore their natural patterns and attributes. By incorporating these principles into forest management planning, we can provide habitat for all organisms, maintain diverse gene pools, and maintain the processes that support biodiversity and healthy ecosystems.

Along with the biotic elements, air, soil and water are the basic abiotic components of forest ecosystems. Air, soil and water quality and quantity are strong controlling factors on forest development processes. Air, soil and water must be kept in sufficient quantities and/or quality to maintain the health of our forest environment.

Air, soil and water experience and suffer from many human intrusions that could ultimately affect the quality of our own lives and that of our forest environment. Forests can influence and mitigate these effects to some degree if maintained in a diverse and healthy growing condition. To prevent adverse effects on air, soil and water by human interventions, forest practices must be designed in accordance with the following principles that commit to conserving and protecting these critical elements of our forests.

- Forest practices will be designed and conducted to conserve and enhance the health and natural diversity of Nova Scotia's forest ecosystems.
- Forest management strategies will incorporate the DNR Ecological Land Classification System for Nova Scotia into all practices.
- Forest practices will contribute to the condition of Nova Scotia's wildlife species.
- Forest practices will contribute to the protection of habitat for species at risk.

- Forest practices will recognize the contribution of wilderness and other protected areas to preserve the natural forest heritage of the ecoregions occurring in Nova Scotia.

- Forest practices will be conducted in a manner that maintains and enhances the quality of air, water and soil in Nova Scotia.

- Forest condition and diversity will be managed in ways to mitigate adverse effects of climate change in Nova Scotia.

PRINCIPLES FOR THE MANAGEMENT OF FOREST PRODUCTS, WILDLIFE HABITAT, AND INTEGRATED FOREST USE

Forest Products

A major component of management activities and forest practices are conducted for the purpose of producing economically valuable forest products from the forests of Nova Scotia. Despite the increased pressures for non-timber uses, wilderness areas, endangered species habitat, recreation and tourism and recreation needs and many other environmental issues, the production of timber-related products in a sustainable manner will remain a vital feature of the Nova Scotian economy. Principles that establish environmentally sound sustainable practices and lead to meeting the demands for products required by society are of utmost importance. These principles must develop the framework for achieving a sustainable harvest and sustainable growth for quality timber. Three key principles set the basis for timber supply sustainability.

- Forest management practices will be designed to secure a long-term sustainable harvest of forest products.
- Forest management practices will be designed and conducted to improve forest productivity and the quality of forest products.
- Forest management practices will incorporate the best available knowledge of local ecological conditions, including soil, climate, water, terrain, vegetation and wildlife habitat, in the planning process for roads, harvesting systems and silvicultural activities.

Wildlife Habitat

The wealth of natural life has evolved in Nova Scotia through centuries of climatic change and natural succession. In recent times, human land use in Nova Scotia has brought about changes in forest composition and wildlife species within the forest. The overall effect of these changes on the biodiversity is largely unknown, however, for some species the impacts of human activities on their habitat requirements is well documented. Guidelines for forest practices that provide direction to forest operators can go a long way to maintaining and even enhancing habitat requirements for many of Nova Scotia's wildlife species. As new knowledge of lesser known species and habitats becomes available, practices will have to be adapted on a continual basis.

Code principles for wildlife habitat management must maintain and enhance natural forest conditions required for healthy species populations, and take steps to improve habitats of species that are in various stages of being threatened or endangered. The following principles provide the framework for regulations, guidelines and standards for Crown and private lands.

- Forest practices will be conducted to maintain and restore the natural range and structure of forest communities to benefit the wildlife species of Nova Scotia.

- Forest management practices will respect significant wildlife habitats in Nova Scotia forests.

Integrated Forest Use

The complex demands that are being placed on forests by today's society must be balanced to the extent that ensures sustainability of multiple uses, rural communities and the forest environment. The process of developing an IRM framework for Crown lands is considering society's demands and environmental concerns for multiple uses of the public forest.

Urban and rural populations often have divergent views and needs from both public and private forests. In reality, economic and leisure activities for all communities are highly dependent on the forest environment. Designing forest management practices to create forest diversity and structure to meet all the divergent uses requires considerable participation on the part of all parties to achieve an integrated plan of forest use. Crown forest lands require an IRM framework to respect the interests of public ownership of those lands. Private landowners, whether the holdings be large or small, are not duty-bound to provide for a multitude of uses on their properties. In many cases, private landowners already manage their forests for integrated uses to meet their own objectives, and for protection of the health and diversity of the forest environment, and for the leisure activities of neighbours and surrounding communities.

The following principles are to be considered when planning and undertaking forest practices:

- Forest management practices will be designed to balance economic, social, environmental and recreational interests and values of landowners and the public.

- Forest practices will be planned and designed to consider structure and diversity elements required for the integration of public interests and economic uses.

GLOSSARY OF TERMS

Biodiversity
The total variability of life on earth including the diversity of genes, species and ecosystems.

Crown lands
Public land that is managed by the national of provincial/territorial government.

Ecosystem
A dynamic system of plants, animals and other organisms, together with the non-living components of the environment, functioning as an interdependent unit.

Forest
An ecosystem characterized predominantly of trees with associated woody, herbaceous, bryophyte vegetation and associated faunal communities both above and below ground.

Forest Practice
An intervention/activity in a forest environment by humans either directly or indirectly for the many purposes of existence and/or enterprise.

Forest Products
All primary forest products according to the definition in the Forests Act.

Non-timber Forest Products
Any commodity obtained from the forest that does not necessitate harvesting trees.

Protected areas
A geographically defined area which is designated or regulated and managed to achieve conservation objectives.

Wildlife
All wild animals, birds, reptiles, amphibians, fishes, invertebrates, plants, fungi, algae, bacteria, and other wild organisms.

REFERENCES

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APPENDIX I

List of Acts and Regulations

Acts:

Nova Scotia Dept. of Natural Resources

- Forests Act, Amended 2000
- Crown Lands Act, 1987
- Forest Enhancement Act, 1986

Nova Scotia Dept. of Environment and Labour

- Wilderness Area Act, 1999
- Environment Act, Amended 1998
- Water Resources Protection Act, 2000

Regulations

- Pesticide Regulations, 1995
- Forest Sustainability Regulations, 2000
- Wildlife Habitat & Watercourse Protection Regulations, 2001